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## **KANSAS DEPARTMENT OF HEALTH & ENVIRONMENT**

### **PROCEDURE FOR SUBMITTING A PROPOSAL TO ADD A NEW OR DIFFERENT WASTE TO A CLASS I UIC INDUSTRIAL WASTE INJECTION WELL PERMIT**

#### **Procedure #: UICI-17**

##### Narrative:

The UIC permit for a Class I Industrial Waste Injection well lists the wastes permitted for disposal into the well. In order for a new or different waste to be legally injected, the UIC permit must be modified to include the new or additional waste. The UIC permit also requires that the permittee notify KDHE of any facility changes or process modifications which may result in new, different or altered wastestreams, an increase in wastestream volumes, or an increase in concentration of pollutants at least one hundred eighty (180) days before such changes. It is recommended KDHE approval to dispose of the waste into the injection well be obtained before commencing any construction. The proposal to add a new or different waste will be evaluated by KDHE to determine if disposal into an injection well is feasible and, if feasible, determine what additional monitoring, testing or reporting requirements need will incorporated into the UIC permit. The minimum elements to be included in the proposal are listed in the guideline section below.

##### Procedure:

The proposal to add a new or different wastestream to the Class I UIC permit must be made in writing and include the following:

1. An analysis of a representative sample of the waste for the constituents listed on Attachment "A" 129 Priority Pollutants.
2. An analysis of a representative sample of the waste using the Toxic Characteristics Leaching Procedure for the constituents listed on Attachment "B".
3. An analysis of a representative sample of the waste for the minerals listed on Attachment "C", pH, oil and grease and total suspended solids.
4. Any additional analysis or tests for constituents which would be expected to be found in the waste or that are necessary to properly characterize the waste.
5. A Kansas certified laboratory certified to analyze for the required constituents shall be used. A list of certified laboratories is attached.
6. MSDS for any additives used.
7. A report describing the compatibility of the new wastestream with the existing wastestream, well components, injection interval, confining interval and the results of tests or studies conducted to evaluate compatibility.

8. Volume of waste to be generated.
9. A report describing why injection into a subsurface geologic formation is the most feasible method of disposal. This report should follow the format of the enclosed KDHE policy for determining the types of wastes that are eligible for disposal into an injection well. This report should include an evaluation of options including waste minimization and waste recycling technologies, discharge to a public owned treatment works, discharge to a total retention lagoon for evaporation, irrigation, or recycle, or NPDES discharge to surface water. Ponds must be constructed in accordance with the attached Industrial Wastewater Pond Liner policy.
10. Confirmation by appropriate calculations that UIC permit injection limits will not be exceeded.
11. Detailed diagrams, schematics and specifications describing the pipes and tanks or basins to be used to transfer, handle, collect, store, and subsequently direct the waste to the injections wells. Include a flow diagram.

## ATTACHMENT "A"

### PRIORITY POLLUTANTS

#### **1. VOLATILE ORGANIC**

**COMPOUNDS** (Method 624-Purge & Trap GC/MS) Detection limits nominally 10 ug/L for Acrolein and Acrylonitrile at 100 ug/L

Acrolein  
Acrylonitrile  
Benzene  
Bromomethane  
Bromodichloromethane  
Bromoform  
Carbon Tetrachloride  
(Tetrachloromethane)  
Chlorobenzene  
Chloroethane  
2-Chloroethylvinyl ether  
Chloroform  
Chloromethane (Methylchloride)  
Dibromochloromethane  
1,1-Dichloroethane  
1,2-Dichloroethane  
1,1-Dichloroethene  
trans-1,2-Dichloroethane  
1,2-Dichloropropane  
cis-1,3-Dichloropropane  
trans-1,3-Dichloropropane  
Ethylbenzene  
Methylene chloride  
(dichloroemethane)  
1,1,2,2-Tetrachloroethane  
1,1,1-Trichloroethane  
1,1,2-Trichloroethane  
Trichloroethene  
Trichlorofluoromethane  
Toluene  
Vinyl Chloride

#### **2. ACID ORGANIC COMPOUNDS**

(Method 625-Extractions GC-MS)  
Detection limits nominally 25 ug/L except for dinitro compounds at 250 ug/L

4-Chloro-3-methylphenol  
2-Chlorophenol  
2,4-Dichlorophenol  
2,4-Dimethylphenol  
2-Methyl-4,6- dinitrophenol  
2-Nitrophenol  
4-Nitrophenol  
Pentachlorophenol  
Phenol  
2,4,6-Trichlorophenol

#### **3. BASE/NEUTRAL ORGANIC**

**COMPOUNDS** (Method 625-Extraction GC/MS) Detection limits nominally 10 ug/L

A. Polynuclear Aromatics  
Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo (a) anthracene  
Benzo (b) fluoranthene  
Benzo (a) fluoranthene  
Benzo (a) pyrene  
Benzo (g,h,i) perylene  
Chrysene  
Dibenzo (a,h) anthracene  
Fluoranthene  
Fluorene  
Indeno (1,2,3-cd) pyrene  
Naphthalene  
Phenanthrene  
Pyrene  
B. Ethers & Esters  
Bis (2-chloroethyl) ether  
Bis (2-chloroethoxy) methane  
Bis (2-ethylhexyl) phthalate  
Bis (2-chloroisopropyl) ether  
4-Bromophenyl phenyl ether  
Butyl benzyl phthalate  
4-Chlorophenyl phenyl ether  
Diethylphthalate  
Dimethylphthalate  
Dioctylphthalate  
Di-n-butylphthalate  
Isophorone  
C. Nitrogen Containing  
Compounds  
Benzidine  
2,4-Dinitrotoluene  
2,6- Dinitrothlune  
1,2- Diphenylhydrazine  
Nitrobenzene  
N-Nitrosodimethylamine  
N-Nitrosodi-n-proplamine  
N-Nitrosodiphenylamine  
D. Chlorinated Hydrocarbons  
2-Chloronaphthalene  
1,3-Dichloronbenzene  
1,4-Dichloronbenzene  
1,2-Dichloronbenzene  
3,3-Dichloronbenzidine  
Hexachlorobenzene  
Hexachlorobenzidine  
Hexachloroethane  
Hexachlorocyclopentadiene

2,3,7,8-Tetrachlorodibenzo-p- dioxin  
1,2,4-Trichlorobenzene

#### **4. PESTICIDE COMPOUNDS**

(Method 625-Extraction GC/EC)  
Detection limits nominally 0.01ug/L

Aldrin  
a-BHC  
β-BHC  
d-BHC  
?-BHC  
Chlorodane  
4,4'-DDD  
4,4'DDD  
4,4'DDT  
Dieldrin  
Endosulfan I  
Endosulfan II  
Endosulfan Sulfate  
Endrin  
Endrin Aldehyde  
Heptachlor Epoxide  
Toxaphene  
PCB-1016  
PCB-1221  
PCB-1232  
PCB-1242  
PCB-1248  
PCB-1254  
PCB-1260

#### **5. HEAVY METALS**

Antimony  
Arsenic  
Beryllium  
Cadmium  
Chromium  
Copper  
Lead  
Mercury  
Nickel  
Selenium  
Silver  
Thallium  
Zinc

#### **6. MISCELLANEOUS**

Cyanides  
Phenols

## **ATTACHMENT “B” TCLP REQUIREMENTS**

The following constituents are regulated under the Toxicity Characteristic rule. The Waste Stream must be analyzed for these constituents using the Toxicity Characteristic Leaching Procedure (TCLP).

Benzene  
Carbon tetrachloride  
Chlordane  
Chlorobenzene  
Chloroform  
m-Cresol  
o-Cresol  
p-Cresol  
1,4- Dichlorobenzene  
1,2- Dichloroethane  
1,1 Dinitrotoluene  
2,4- Dinitrotoluene  
Heptachlor (and its hydroxide)  
Hexachloro-1,3-butadiene  
Hexachlorobenzene  
Hexachloroethane  
Methylethylketone  
Nitrobenzene  
Pentachlorophenol  
Pyridine  
Tertachloroethylene  
Trichloroethylene  
2,4,5-Trichlorophenol  
2,4,6-Trichlorophenol  
Vinyl chloride  
Arsenic  
Barium  
Cadmium  
Chromium  
Lead  
Mercury  
Selenium  
Silver  
Endrin  
Lindane  
Methoxychlor  
Toxaphene  
2,4-Dichlorophenoxyacetic acid  
2,4,5-Trichlorophenoxypropionic acid

## **ATTACHMENT “C” GEOCHEMICALS**

### **7. GEOCHEMICALS**

Total Hardness (CaCO<sub>3</sub>)

Calcium

Sodium

Magnesium

Potassium

Total Alkalinity

Chloride

Sulfate

Fluoride

Nitrate

Iron

Manganese

Ammonia

Phosphate

Silica

Specific Conductance

Total Dissolved Solids

Total Suspended Solids

Oil and Grease